



# FACT SHEET



Description	Multimission, Multiservice, Twin-turbine, Vertical-lift, Tiltrotor Transport Aircraft employed by the United States Marine Corps and the United States Special Operations Command, USSOCOM
Manufacturer	Bell Boeing
Program Status	Full Rate Production
Program Requirements	U.S. Marine Corps - 360 MV-22s for Combat Assault and Assault Support USSOCOM - 50 CV-22s Operated by Air Force Special Operations Command for Long-Range Special Operations U.S. Navy - 48 MV-22s for Personal Recovery, Special Warfare and Fleet Logistics Support
Program Managers	
Military	Colonel Greg Masiello, USMC, V-22 Joint Program Office, NAS Patuxent River
Bell Boeing	John G. Rader, Vice President, Bell Boeing V-22 Program, Patuxent River, MD
Accomplishments	As of March 2011, V-22 aircraft have flown over 100,000 hours, participated in multiple land-based and shipboard deployments, demonstrated speeds of 342 knots, altitude of 25,000 ft, gross weight of 60,500 lb and a G maneuver load factor of +3.9 at 260 knots. External loads of 10,000 lb have been carried at 230 knots.

## Milestones

1 <sup>st</sup> Flight, AC No. 1	March 1989
1 <sup>st</sup> Sea Trial	December 1990
1 <sup>st</sup> EMD Flight	February 1997
1 <sup>st</sup> LRIP Delivery	May 1999
OPEVAL I	July 2000
Operational Pause	December 2000
Return to Flight	May 2002
OPEVAL II	June 2005
Full Rate Production	September 2005
1st Transatlantic Flight	June 2006
MV-22 OIF Deployment	October 2007 to April 2009
Multiyear I	March 2008
100th V-22 Delivery	May 2008
1st MEU Deployment	May 2009 to November 2009
CV-22 OIF Deployment	August 2009 to November 2009
MV-22 OEF Deployment	November 2009 to Present
CV-22 OEF Deployment	March 2010 to November 2010

## Marine Squadron Standups

VMMT-204	June 1999 (MV-22 Training Squadron)
VMX-22	August 2003 (Operational Test & Evaluation Squadron)
VMM-263	March 2006 (1st MV-22 Operational Squadron)
VMM-162	August 2006 (2nd MV-22 Operational Squadron)
VMM-266	March 2007 (3rd MV-22 Operational Squadron)
VMM-261	April 2008 (4th MV-22 Operational Squadron)
VMM-365	January 2009 (5th MV-22 Operational Squadron)
VMM-264	May 2009 (6th MV-22 Operational Squadron)
VMM-161	October 2009 (7th MV-22 Operational Squadron)
VMM-166	June 2010 (8th MV-22 Operational Squadron)
VMM-561	December 2010 (9th MV-22 Operational Squadron)
VMM-165	April 2011 (10th MV-22 Operational Squadron)
VMM-163	December 2011 (11th MV-22 Operational Squadron)

## AFSOC Squadron Standups

71st SOS	May 2005 (CV-22 Training Squadron)
8th SOS	October 2006 (1st CV-22 Operational Squadron)
20th SOS	January 2010 (2nd CV-22 Operational Squadron)

## V-22 Acquisition Strategy

### USMC MV-22

- Block A  
Training Aircraft
- Block B  
Block A plus Combat Capability Improvements and Enhanced Maintainability
- Block C (currently in production)  
Block B plus Mission Enhancements and Upgrades

### USAF CV-22

- Block 0  
Block A plus Multimode Radar and Suite of Integrated Radio Frequency Countermeasures (SIRFC)
- Block 10 (currently in production)  
Block B and Block 0 plus Directed Infrared Countermeasures (DIRCM)
- Block 20  
Block C and Block 10 plus Mission Enhancements/Upgrades

Commonality:    Block B and Block 10    Airframe 90%    Avionics 40%    Propulsion 100%

# V-22 Characteristics

## ENGINES

Model	Rolls-Royce Liberty AE1107C
AEO VTOL Normal Power, shp (kW)	6,150 (4,586)
AEO VTOL Interim Power, shp (kW)	6,830 (5,093)
OEI VTOL, shp (kW)	6,830 (5,093)

## TRANSMISSION

AEO VTOL Max Cont., shp (kW)	4,570 (3,408)
AEO VTOL Takeoff, shp (kW)	5,183 (3,865)

## PROPROTOR SYSTEM

Blades Per Hub	3
Construction	Graphite/fiberglass
Tip Speed, fps (mps)	661.90 (201.75)
Diameter, ft (m)	38.08 (11.61)
Blade Folding	Automatic, powered

## PERFORMANCE (at 47,000 lb)

Max Cruise Speed, SL, kts (km/h)	280 (518)
Max R/C, A/P Mode, SL, fpm (m/m)	3,200 (975)
Service Ceiling, ISA, ft (m)	25,000 (7,620)
OEI Service Ceiling, ISA, ft (m)	10,300 (3,139)
HOGE Ceiling, ISA, ft (m)	5,400 (1,646)

## MISSION RADIUS, nm(km)

MV-22 Block B	430 (796)
<ul style="list-style-type: none"> <li>• 24 troops</li> <li>• Ramp Mounted Weapon System</li> <li>• Sea Level Standard Day</li> <li>• 15 min Loiter Time</li> </ul>	

## ACCOMMODATION

Cockpit – Crew Seats	3 MV / 3 CV
Cabin – Crew Seat/Troop Seats	1/24

## DIMENSIONS (EXTERNAL)

Length, Fuselage, ft (m)	57.3 (17.48)
Width, Rotors Turning, ft (m)	84.6 (25.78)
Length, Stowed, ft (m)	63 (19.20)
Width, Stowed, ft (m)	18.4 (5.61)
Width, Horizontal Stabilizer, ft (m)	18.4 (5.61)
Height, Nacelles Fully Vertical, ft (m)	22.1 (6.73)
Height, Vertical Stabilizer, ft (m)	17.9 (5.46)
Height, Stowed, ft (m)	18.3 (5.56)

## DIMENSIONS (INTERNAL)

Length, max, ft (m)	20.8 (6.34)
Width, max, ft (m)	5.66 (1.72)
Height, max, ft (m)	5.51 (1.68)

## WEIGHTS

Takeoff, Vertical, max, lb (kg)	52,600 (23,859)
Takeoff, Short Running, max, lb (kg)	57,000 (25,855)
Takeoff, Self-Deploy Mission, lb (kg)	60,500 (27,443)
Cargo Hook, Single, lb (kg)	10,000 (4,536)
Cargo Hook, Dual, lb (kg)	15,000 (6,804)

## FUEL CAPACITY

MV-22, gallons (liters)	1,721 (6,513)
CV-22, gallons (liters)	2,025 (7,667)

